

ABSTRACT OF THE DISCLOSURE

In an apparatus and method of noninvasively measuring a concentration of a blood component, the method includes (a) varying a thickness of a body part of a subject, measuring absorption spectrums at different thicknesses of the body part, obtaining a first differential absorption spectrum between the absorption spectrums measured at different thicknesses, actually measuring concentrations of the blood component, and establishing a statistical model using the first differential absorption spectrum and the actually measured concentrations; and (b) estimating the concentration of the blood component using a second differential absorption spectrum obtained with respect to the body part based on the statistical model.